

## ABSTRACT OF THE DISCLOSURE

Piezoelectric plates conduct bending vibrations and are axially symmetrical about the vibration shaft so the piezoelectric plates conduct a bending vibration, lower vibrating ends of the piezoelectric plates are rigidly connected to a vibration suppressing member and upper vibration ends of the piezoelectric plates are rigidly connected to the vibration shaft, an inner edge of each of the piezoelectric plates excluding the vibration connection part is free of the vibration shaft, a bending vibration at the lower vibrating end of each of the piezoelectric plates is suppressed on the vibration suppression connection part side and a bending vibration at the upper vibrating end is amplified and then applied to the vibration shaft and the liquid detecting element which is disposed at a lower end of the vibration shaft, through the vibration connection part, so that the liquid detecting element is vibrated in the circular direction in the measuring liquid.